

**Amendments to the Claims:** This listing of claims will replace all prior versions, and listings, of claims in the application

**Listing of Claims:**

1. (Currently Amended) A process for the separation of a stream containing propane and/or butanes from a hydrocarbon feedstock contaminated with alkyl mercaptans by fractional distillation at such a pressure that ~~the~~a separated overheads stream containing said propane and/or butanes is at a temperature in the range 50 to 100°C, comprising introducing sufficient oxygen into said hydrocarbon feedstock to oxidise the mercaptans therein and subjecting the resultant mixture to the fractional distillation in a column including at least one bed of a catalyst capable, under the prevailing conditions, of oxidising mercaptans to higher boiling point sulphur compounds, and separating the higher boiling point sulphur compounds as part of ~~the~~a liquid phase from the distillation.
2. (Original) A process according to claim 1 wherein the catalyst comprises a granular material containing a transition metal on a support.
3. (Currently Amended) A process according to ~~claim 1 or~~ claim 2 wherein the transition metal comprises copper, manganese or cobalt or a mixture of two or more of these.
4. (Currently Amended) A process according to ~~any one of claims 1 to~~ claim 3 wherein the catalyst is a granular material comprising copper sulphates, sodium chloride and water on a clay support.
5. (Currently Amended) A process according to ~~any one of claims~~ claim 1 ~~to 4~~ wherein the amount of mercaptans present in the hydrocarbon feedstock is less than 2000 ppm volume.
6. (Currently Amended) A process according to ~~any one of claims~~ claim 1 ~~to 5~~ wherein the distillation is effected at a pressure in the range 5 to 25 bar abs.
7. (Currently Amended) A process according to ~~any one of claims~~ claim 1 ~~to 6~~ wherein the oxygen is supplied by dissolving air in the hydrocarbon feedstock.
8. (Currently Amended) A process according to ~~any one of claims~~ claim 1 ~~to 7~~ wherein water is incorporated into the hydrocarbon feed in such an amount that it is miscible with the hydrocarbon stream under the prevailing conditions.